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Conference Abstract

Sharing Species Pages through Living Atlases using Plinian Core: Current state and new developments

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Abstract

Living Atlases (living-atlases.gbif.org) is a community of developers and organizations built around the software platform developed by the Atlas of Living Australia (ALA, ala.org.au). ALA includes a number of open source reusable modules designed to assemble biodiversity data portals. Nowadays, more than 25 institutional and national biodiversity portals around the world have been implemented with the ALA tools (living-atlases.gbif.org/participants). The community organizes workshops and prepares training materials to present ALA modules to other institutions that want to implement it, to improve already existing portals and to learn from each other's achievements (living-atlases.gbif.org/about). ALA based portals integrate data from multiple sources using biodiversity data standards ruled by TDWG, such as Darwin Core for species occurrences. The Living Atlases community is working in the integration of other data types, like species records and sampling events.

Plinian Core (PliC) is a generalistic specification, oriented to share descriptions and nomenclature, as well as many other aspects (e.g. legal, conservation, and management details) of species level information from local and regional sources (Pando 2018). Following several years of development and earlier versions, PliC version 3.1 was made publicly available in 2012. The following year, after the approval of the "Species Information Interest Group" by the TDWG Executive, a TDWG Task Group was created to start aligning Plinian Core with the TDWG Standards Documentation Standard (SDS). Several full-

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fledged implementations of Plinian Core were produced, between 2014 and 2019, including the Atlas of Living Costa Rica (CRBio.cr), the Cross-Nature Project (datos.iepnb.es), the Vasque Country (Spain) Official Nature Information System (ivap.euskadi.eus), the Colombian Biodiversity Catalog (catalogo.biodiversidad.co) and Enciclovida (Mexican Species Catalog, enciclovida.mx). These last three years, the Plinian Core Task Group has reviewed definitions of terms and formal declarations, assisted by the TDWG Technical Architecture Group (TAG), with the objective of ratifying PliC as a TDWG Standard.

One of the most used tools to share standardized biodiversity data is the GBIF Integrated Publishing Toolkit (IPT, gbif.org/en/ipt). The IPT is an open source web application that allows institutions to standardize, to publish and share biodiversity data sets through Living Atlases, GBIF, and other biodiversity networks. The toolkit simplifies the process of publishing core data types (e.g. taxon occurrence, taxon checklists, sampling event) and, by means of extensions, it is possible to associate additional data with records of the core type. As part of our project, the extensions of PliC, accessible in the IPT Sandbox, were validated to show how they can be used by institutions to publish species pages through the IPT.

In order to fully integrate Plinian Core based species pages into the ALA architecture, the Biodiversity Informatics Research Center (CRBio) has been working on the adoption of the Biodiversity Information Explorer (BIE), an ALA module which manages taxonomic and species contents by integrating global resources like EOL or Wikipedia. This adoption includes the required modifications of the Portal codebase to use the data model of the Plinian Core (github.com/tdwg/PlinianCore) to display a much richer content. This year, with assistance from the Capacity Enhancement Support Programme (CESP) from GBIF, we have revisited the integration of species pages information and expanded the content and type of information provided by the Atlas of Living Costa Rica.

We present here the updated ALA Species Pages (ALA-BIE) and Index (BIE-Index) Modules and general documentation that could be applied to any ALA installation in order to prepare species records using the IPT and PliC standard, index and display them through the ALA-BIE Module.

Keywords

ALA, IPT, PliC, Standard, Spanish, Costa Rica

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